

Claims

Claimed is:

1. A level limit valve for the fuel tank of a motor vehicle which possesses:
 - a valve body (1) which can be positioned inside the fuel tank on the end of a fuel filling pipe, which valve body (1) has an inlet port (22) connectable to said filling pipe and an outlet port into the interior of the fuel tank,
 - a flap (4) placed in the valve body (1) which is pivotally secured between a position which tightly closes the outlet port and a position which releases the same,
 - a float (3), which is movably connected to the flap (4) for a pivotal movement of said flap by means of a lever rod (5), whereby the lever rod (5) penetrates through the outlet port (21), at least in the opened position of the flap (4) and which lever rod (5) is connected with that outer side (28) of the flap (4) proximal to the outlet port.
2. A level limit valve in accord with Claim 1, characterized by an escape boring (85) connecting the interior valve chamber (26) with the interior space of the tank.
3. A level limit valve in accord with Claim 1 or 2, therein characterized, in that the valve body (1) is essentially in the form of a tube section, whereby on the end surface facing fuel flow, a transverse wall (23) is present, which wall contains the outlet port (21), on the inside of which a sealing edge (27) is placed which peripherally, in ringlike form, encompasses the outlet port (21) and coacts with the flap 4.
4. A level limit valve in accord with Claim 1, therein characterized, in that the pivotal axis (38) of the flap (4) aligns two pivot pins (33), which are formed on said flap (4) by a cross pieces (37) extending from the flap rim (36), whereby the said pivot pins (33), pointing away from one another above said cross pieces (37) in the pivot axis (38), engage in bearing seatings (30) on the inner side of the transverse wall (23).

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5. A level limit valve in accord with Claim 3, therein characterized, in that the bearing seats (30) are each made from a valve body web (32) formed on the transverse wall inner side which said web extends itself into a space (39) between the flap periphery and the pivot pin (33) and is formed from the valve body wall (34).
6. A level limit valve in accord with Claim 3, characterized by two detent clips (87) located on that end of the inlet fitting (6) extending in the direction of fuel flow, which said inlet fitting (6) can be connected to the filling pipe and which is connected to the inlet port (22) of the valve body (1), and which detent clips (87) protrude through the inlet port (22) into the interior chamber (26) of the valve and which fix the pivoting pins (33) in the bearing seats (30).
7. A level limit valve in accord with Claim 1, characterized by a flow diverter (83) placed in the direction of flow (20) before the flap (4), which prevents a direct impact of the kinetic force of the flow on the flap (4) when said flap is in its opened condition.
8. A level limit valve in accord with Claim 7, therein characterized, in that the flow diverter (83) is placed in the connection fitting (6).
9. A level limit valve in accord with Claim 1 characterized by an assembly condition in which the central axis (7) of the valve body (1) and the pivot axis (38) of the flap (4) run in an essentially horizontal direction.
10. A level limit valve in accord with Claim 9, characterized by a carrier (2) placed downstream of the end (31) of the valve body (1), on the upper side of which carrier (2) the float (3), which is connected to the lever rod (5) in the assembled condition, is set in bearings with capability for vertical movement.

11. A level limit valve in accord with Claim 10, therein characterized, in that the carrier 2 possesses on its upper side a centrally located opening (75) which is penetrated by the lever rod (5).

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Summary

The invention concerns a level limit valve for the fuel tank of a vehicle. Such valves serve the purpose, that upon the filling of the fuel tank, the filled quantity of the fuel is limited. The proposed level limit valve possesses a valve body 1 which can be positioned within the fuel tank at the end of a filling pipe. The valve body is equipped with an intake port 22 which is connectable with the said filling pipe and an outlet port 21 emptying into the interior of the fuel tank. Further, in the valve body 1 is found a flap 4, which is pivotally movable between a position tightly sealing the outlet port 21 and a position wherein this is opened. The float 3 is movably connected to said flap 4 by means of a lever rod 5. The lever rod 5 penetrates the outlet port 21 at least in the opened position of the flap 4 and is connected by means of linkage with that outer side 28 of the flap 4 which is proximal to the outlet port 21.

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